

## Exhibit 300: Capital Asset Summary

### Part I: Summary Information And Justification (All Capital Assets)

#### Section A: Overview & Summary Information

**Date Investment First Submitted:** 2009-01-12  
**Date of Last Change to Activities:** 2012-07-23  
**Investment Auto Submission Date:** 2012-02-22  
**Date of Last Investment Detail Update:** 2012-06-28  
**Date of Last Exhibit 300A Update:** 2012-07-23  
**Date of Last Revision:** 2012-07-23

**Agency:** 009 - Department of Health and Human Services  
Prevention

**Bureau:** 20 - Centers for Disease Control and

**Investment Part Code:** 01

**Investment Category:** 00 - Agency Investments

**1. Name of this Investment:** CDC PHIN: BioSense

**2. Unique Investment Identifier (Ull):** 009-000001372

#### Section B: Investment Detail

- 1. Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

In 2003, CDC developed an electronic syndromic surveillance system called BioSense that uses health-related data to identify patterns of disease symptoms prior to specific diagnoses. In late 2007, CDC began to redesign the program to improve collaboration with stakeholders and address identified management weaknesses. In FY10, CDC started redesigning the BioSense program based on input and guidance from local, state, and federal partners. The goal of the redesign effort is to be able to provide nationwide and regional situational awareness for all-hazard health-related threats and to support national, state, and local responses to those threats. While the redesign is planned to occur over the next few years, modification and maintenance of the BioSense surveillance networks is expected to be a systematic and continuous process that will evolve throughout the redesign and thereafter in response to new information and stakeholders needs. The redesigned BioSense program will focus on: 1) improving coordination and links between existing state and local disease surveillance monitoring systems and BioSense, and 2) moving from a need-to-know to a need-to-share model by building a Network of Networks for sharing information, insights, interpretations, lessons-learned, protocols, and technical assistance. By integrating local and state-level data into a cohesive "picture," BioSense will improve its utility for state and local users. This is consistent with the 2006 Pandemic All Hazards Preparedness Act

(PAHPA), 2007 Homeland Security Presidential Directive (HSPD-21), Health IT Guiding Principles, all of which call for regional and nationwide public health situation awareness, through an interoperable network of systems, built on existing state and local situation awareness capability. The structure of BioSense Redesign (2.0) differs substantially from its original design. As a response to stakeholders' constraints related to technology and funding, the Program has shifted to a community-owned implementation where stakeholders will share in ownership of the system. BioSense 2.0 terminated the collection and maintenance of raw clinical data at CDC. Utilizing Cloud technology, BioSense 2.0 emphasizes the direct reporting of data from hospitals to state and local health departments instead of CDC. ASTHO is responsible for providing a community-controlled environment hosted on the Internet Cloud or support individual capable Health Departments.

**2. How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.**

The BioSense Program is critical to improving local, state, and federal surveillance capacity to increase insight into the health of communities and the country. It helps guide public health decision making and action at the local, regional and national level. With BioSense, the public health community is able to more efficiently track health problems as they evolve and provide public health officials with the data, information and tools they need to better prepare for and coordinate responses to public health crisis. In real-world application, BioSense has contributed advances to the field of public health surveillance and has provided key support for numerous responses to public health emergencies. The BioSense program worked with partners on defining 90 syndromes and sub-syndromes that encompass infections, injuries, chronic diseases, exposures, miscellaneous conditions and specified ICD-9 codes, and free-text search terms corresponding to these concepts. Working with the academic community, the BioSense program performed research on and provided practical applications for spatio-temporal scanning (SaTScan) and anomaly detection algorithms. The BioSense program created the minimum dataset specification which was later adopted by the Healthcare Information Technology Standards Panel (HITSP). BioSense has also generated details and peer reviewed publications establishing the knowledge and experience about the data analytic issues for timely public health surveillance. The program sustained a 40% budget cut in FY2012 which absorbed much of the IT cost savings of BioSense 2.0. BioSense had planned to utilize these cost savings by funding state and local health departments. With these cuts, BioSense 2.0 faced severe restrictions with workforce capacity support for the states with the possibility of not being able to support some states already. Further cuts would be catastrophic to CDC as well as the state health departments and the public health community at large. Without the public health surveillance and human capacity support provided by BioSense 2.0, many states would not be able to maintain their own syndromic surveillance or collaborate with other jurisdictions hampering the ability to serve the larger regional or national population as a whole.

**3. Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.**

A new Data User Agreement (DUA) template was established which provides a foundation for managing the provisions and policies for the constituents of the new BioSense 2.0 system.

In November 2011, BioSense 2.0 was launched. The BioSense Team began the recruitment of new BioSense stakeholders as a part of the BioSense 2.0 implementation. As of May 2012, new Data User Agreements have been established with 15 states. BioSense 1.0 was retired which included the bifurcation of data feeds from BioSense 1.0 to 2.0. This included the shutdown of existing data feeds to BioSense 1.0. A prototype system was developed and used to obtain feedback from stakeholders and end users. The feedback gained from stakeholders will allow further improvements in the functionality of the BioSense system.

**4. Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

Establish performance measures and metrics that reflect industry standards for technology performance and highlight the Program's new collaborative, community-centered architecture. Establish a permanent community-owned (local, state, and federal) governance model that establishes the guidance and policies for regulating the BioSense 2.0 ecosystem and environment. Demonstrate 2-3 examples of data sharing within the BioSense 2.0 system. Establish 24 signed DUAs with jurisdictions by year's end.

**5. Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.**

2002-11-01

## Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	\$1.1	\$0.4	\$0.4	\$0.4
DME (Excluding Planning) Costs:	\$173.7	\$5.6	\$2.6	\$2.6
DME (Including Planning) Govt. FTEs:	\$18.1	\$1.9	\$2.0	\$2.1
Sub-Total DME (Including Govt. FTE):	\$192.9	\$7.9	\$5.0	\$5.1
O & M Costs:	\$25.1	\$8.5	\$4.0	\$3.0
O & M Govt. FTEs:	\$3.5	\$1.3	\$1.2	\$1.2
Sub-Total O & M Costs (Including Govt. FTE):	\$28.6	\$9.8	\$5.2	\$4.2
Total Cost (Including Govt. FTE):	\$221.5	\$17.7	\$10.2	\$9.3
Total Govt. FTE costs:	\$21.6	\$3.2	\$3.2	\$3.3
# of FTE rep by costs:	79	20	20	20
Total change from prior year final President's Budget (\$)		\$2.6	\$-3.0	
Total change from prior year final President's Budget (%)		17.48%	-22.73%	

**2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:**

The launch of BioSense 2.0 was accelerated to November 2011 to take advantage of the deadline for states to adopt Meaningful Use standards. DME (FY2011) was increased to support this effort. BioSense 2.0 will develop a community-shared environment (architecturally distributed in a cloud-based model) governed by the public health community. Consequently, FY2012 funding will shift from support of the current physical architecture (intramural) to the community-shared framework (extramural).

## Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value (\$M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded	7523	<a href="#">HHSD2002010 F34186</a>	GS10F0097L	4730							

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

## Exhibit 300B: Performance Measurement Report

### Section A: General Information

**Date of Last Change to Activities:** 2012-07-23

### Section B: Project Execution Data

**Table II.B.1 Projects**

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
283123	BioSense - Redesign	The purpose of the BioSense Redesign project is to establish a new technical and programmatic environment for the BioSense Program. Activities include collection of new information on end-user requirements and comparison with other existing syndromic surveillance systems that could be adapted to produce standardized system requirements and program design concepts for revisions to the BioSense Program. This will include gathering end-user requirements through formal and informal communication, utilizing unstructured data to gather information on other syndromic surveillance systems and system needs, developing an Operational Plan, and reviewing/revising the existing Strategic Plan to reflect changes in the BioSense Program. It will also require establishing a TEP, which will provide input and advice on the			

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
		development of the new BioSense Program. It will further require producing standardized system requirements for program design concepts and prototypes, which can be developed using open-source/open-access tools. Program design concepts and prototypes will be reviewed and evaluated internally and by an external group of end users. The final selected program design concept/ prototype will include specification, security requirements, proposed program development, testing and evaluation, and documentation. Management support will include the following: - updating the existing BioSense Strategic Plan; - assessing the risks inherent in this plan (already commenced, but assessment of the risks will be ongoing throughout the project); - producing and actively maintaining a Risk Mitigation Plan for the BioSense Program; - providing project support and administration.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities (\$M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance (\$M )	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities
283123	BioSense - Redesign							



Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
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Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
283123	283123: BioSense Redesign Base Yr 1	Conduct environmental scans to determine requirements. Set up collaboration website for partners, associations, health departments, and users. Develop the strategic plan.	2011-06-06	2011-06-06	2011-06-06	364	0	0.00%
283123	283123: Administration and Operational Management Breakout	Covers the administration tasks for the redesign project: Includes Kick Off Meeting, Project Plan, Project Meetings, Progress Reports, and Summary Reports.	2011-11-20	2011-11-20	2011-11-21	166	-1	-0.60%
283123	283123: Gather Requirements (Environmental Scan)	Examine the emerging state of syndromic surveillance systems in U.S. jurisdictions, including technology, policy, workforce capacity, funding, data issues, IT infrastructure, and other topics.	2011-11-21	2011-11-21	2011-11-21	167	0	0.00%
283123	283123: Gather Requirements (End Users)	Primarily gather requirements for supporting TA as stakeholders are transitioned into the new BioSense environment (preparing for the BioSense launch).	2011-11-21	2011-11-21	2011-11-21	167	0	0.00%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
283123	283123: Technical Expert Panel	The TEP will provide additional insight and guidance to the project team and help ensure appropriate interfaces with external projects and stakeholders.	2011-11-21	2011-11-21	2011-11-21	167	0	0.00%
283123	283123: Provide Technical Assistance to End Users	Use the redesigned BioSense application to address surveillance challenges and barriers, develop innovative uses of the BioSense application, and share promising and best practices for using the BioSense application for enhanced public health surveillance.	2011-11-21	2011-11-21	2011-11-21	167	0	0.00%
283123	283123: Design Specifications	Identify the information needs of current and potential BioSense users. Integrate knowledge of the user population into the design of the BioSense application by effectively translating user requirements into concrete specifications for the creation and enhancements of design concepts.	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%
283123	283123: Program Design Specification and Concept Development	Build out BioSense application prototype: implement and test features per Base Year wireframes.	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
283123	283123: Usability Testing and Evaluation	Assure that the BioSense application is developed in accordance with users' expectations, workflows, and information needs. Identify usability challenges in the prototypes.	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%
283123	283123: Collaboration Website	Upgrade the Collaboration Site to match the evolving needs of the BioSense Redesign.	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%
283123	283123: System Documentation	Identify the types of documents and the level of documentation required in order to capture and express the BioSense design in a useful,	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%
283123	283123: Subcontract Management	Management and Administration of Subcontracts	2011-11-30	2011-11-30	2011-11-30	176	0	0.00%
283123	283123: Update Strategic Plan	Develop a Strategic Plan to serve both as a vision and an evaluation tool to assess how Redesign activities are moving the BioSense Program	2011-12-05	2011-12-05	2011-12-05	181	0	0.00%
283123	283123: Update Risk Management Plan	Identify risks for the BioSense Program and Redesign project. Ensure Risk Management Plan is aligned with the Strategic Plan.	2011-12-05	2011-12-05	2011-12-05	181	0	0.00%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
283123	283123: Identify Communication Needs	Educate key audiences on the utility and value of nationwide and regional situation awareness for all-hazards health-related events to broaden the base of support for the BioSense Program.	2011-12-05	2011-12-05	2011-12-05	181	0	0.00%
283123	283123: Communication and Information Dissemination	Provide communications support in the form of materials development to assist professional organizations in recruitment, establishing data feeds, and education.	2011-12-05	2011-12-05	2011-12-05	181	0	0.00%
283123	283123: Challenge Grants	Prepare and administer one round of challenge grants to stakeholders.	2011-12-05	2011-12-05	2011-12-05	181	0	0.00%
283123	283123: Administration and Operations Management Continue	Manages the administration aspects of the project. Includes kickoff meeting, project plan development, management, and maintenance, and the annual summary report.	2012-06-06	2012-08-30		188	-86	-45.74%
283123	283123: Collection of Requirements Continue	Focuses on the activities and deliverables for gathering requirements and assessing best practices for surveillance. Includes	2012-06-06	2012-08-30		197	-86	-43.65%

Key Deliverables								
Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days )	Schedule Variance (%)
		Environment Scan, TEP Recommendations, and Technical Assistance.						
283123	283123: Communication and Design Completion	Communication, Management and control of the redesign. Includes Strategic Plan Update, Communications Plan, Risk Management Plan, and Challenge Grants.	2012-06-06	2012-08-30		183	-86	-46.99%
283123	283123: Development and Evaluation of Design Continue	Determine design specifications and information needs of BioSense users. Includes Design Specifications, Wireframes, Prototype.	2012-06-06	2012-08-30		188	-86	-45.74%
283123	283123: Subcontract Continue	Handles the administration of subcontracts	2012-06-06	2012-08-30		188	-86	-45.74%

## Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Number of Distinct Users	Number	Mission and Business Results - Management of Government Resources	Over target	209.000000	209.000000		209.000000	Semi-Annual
Number of Application Logins	Number	Mission and Business Results - Management of Government Resources	Over target	3812.000000	3812.000000		3812.000000	Semi-Annual
Total Application Session Time	Minutes	Customer Results - Timeliness and Responsiveness	Over target	22994.000000	22994.000000		22994.000000	Semi-Annual
Number of Servicing Sites Reporting	Number	Customer Results - Service Coverage	Over target	2155.000000	2155.000000		2155.000000	Semi-Annual
Number of Records Receives	Number in Millions	Technology - Information and Data	Over target	393.200000	393.200000		393.200000	Semi-Annual
Percentage of Primary RT Sites Sending Data	Percentage	Technology - Effectiveness	Over target	98.000000	99.000000	98.950000	99.000000	Monthly
Percentage of RT Servicing Facilities Sending Data	Percentage	Technology - Information and Data	Over target	88.000000	99.000000	98.950000	99.000000	Monthly